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| EXAMINER |
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BLACKWELL RUDASIL, GWENDOLYN A

| ART UNIT | PAPER NUMBER |
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1775

DATE MAILED: 09/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,373

Applicant(s)

BLAIR ET AL.

Examiner

Gwendolyn A. Blackwell-Rudasill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 27-41 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,10,11,13-15,18-20,23,24,26,42 and 43 is/are rejected.
- 7) ☒ Claim(s) 3,4,8,9,12,16,17,21,22 and 25 is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s).
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 5-6, and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent no. 5,327,747, Nakashima .

Nakashima discloses a metal roll with a glass coating. The metal roll is coated with a smooth glass layer, (column 2, lines 16-23). In addition the glass coating is a silicate glass as demonstrated by the glass compositions in column 4, lines 10-20, meeting the requirements of claims 1-2, 5-6, and 10.

Nakashima also discloses that the smooth glass coating enables the coated roll to have increase chemical durability as well as a non-stick surface, meeting the requirements of claim 11, (column 1, lines 40-50).

3. Claims 1, 10-11, 23-24, and 42-43 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent no. 6,254,976, Ono.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

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102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Ono discloses an electrophotographic charging member in the form of a roll with a protective outer coating, (column 2, lines 61-66). Metal is used as the core/support of the roll, (column 4, lines 18-33). Glass can be used as the protective coating with conductive fine particles dispersed throughout the coating, meeting the requirements of claims 1, 11, 14, and 24, (column 6, lines 52-61).

Ono also discloses that the thickness of the protective layer ranges from 1-300 μm (0.001-0.3 mm), meeting the requirements of claims 42 and 43, (column 7, lines 48-50).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 7, 14-15, and 18-20 are rejected under 35 U.S.C. 103(a) as being obvious over United States Patent no. 6,254,976, Ono in view of United States Patent no. 5,327,747, Nakashima.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

The limitations of claims 1 and 14 have been disclosed above by Ono. In addition, Ono discloses that the electric resistivity of the charging member can be controlled by filling the

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depth of the deposited metal from the bottom of the pore in the porous aluminum film, (column 5, lines 56-62). Ono does not specifically disclose the type of glass used as the protective layer or the surface configuration of the glass.

Nakashima discloses a metal roll with a glass coating. The metal roll is coated with a smooth glass layer, (column 2, lines 16-23). In addition the glass coating is a silicate glass as demonstrated by the glass compositions in column 4, lines 10-20. Nakashima also discloses that the smooth glass coating enables the coated roll to have increase chemical durability as well as a non-stick surface, (column 1, lines 40-50).

Nakashima discloses a glass coated roll that can be used in printing processes, (column 1, lines 11-32). Ono also discloses a glass coated roll that is used in printing processes. As such, it would have been obvious to one skilled in the art to make the glass coating of Ono with the silicate of Nakashima to make a glass coated roll used as a charging member in an electrostatographic imaging apparatus having a smooth surface upon which foreign matter will not stick therefore increasing the productivity of the imaging apparatus.

While Ono does not specifically disclose the electrical resistivity of the film as exemplified by Applicant, Ono has provided a means for controlling the electrical resistivity, (column 5, lines 56-62). As such, one skilled in the art would be able to optimize the electrical resistivity of the glass coating through routine experimentation to obtain the necessary level of electrical resistivity in the coating to fully function as a charging member, (column 1, lines 9-19).

7. Claims 1, 13-14 and 26 are rejected under 35 U.S.C. 103(a) as being obvious over United States Patent no. 6,254,976, Ono in view of United States Patent no. 4,057,666, Drummond.

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Ono disclose the limitations of claims 1 above. Ono does not specifically disclose that the charging member is used in an electrostatographic imaging apparatus.

While Ono does not specifically disclose that the charging member is used in an electrostatographic imaging apparatus, Drummond demonstrates that it is known in the art to use a charging member in electrostatographic processes, (column 1, lines 9-28). Therefore it would have been within the skill of one in the art at the time of invention to use the charging member of Ono in an electrostatographic imaging apparatus wherein the charging member exhibits excellent durability, showing good quality and a good life, (Ono, column 2, lines 38-46).

Allowable Subject Matter

3. Claims 3-4, 8-9, 12, 16-17, 21-22, and 25 are objective to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record do not teach or suggest the glass composition of the coating, the hardness of the coating, the coefficient of thermal expansion, or that the core comprises a non-metallic material with a metal coating formed thereon.

Response to Arguments

8. Applicant's arguments filed July 9, 2003 have been fully considered but they are not persuasive.

Applicant contends that Nakashima does not teach or suggest a glass material for a coating being electrically chargeable or dischargeable nor is there a teaching or suggestion for an

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electrical resistivity value or range. Present claim 1 is drawn to a generic roll with a glass layer that can be electrically charged or discharged. It is not required that the glass layer actually be charged or discharged. Applicant has not provided objective evidence to the contrary that the glass layer of Nakashima cannot be electrically charged or discharged. The roll disclosed by Nakashima and that of the present claims are considered to be essentially the same; therefore, the glass coated roll of Nakashima would have the same characteristics including being chargeable and dischargeable. As to the electrical resistivity, Nakashima was not used under 102(b) to reject any claims based upon the electrical resistivity. As such the 102(b) rejection using Nakashima as pertaining to claims 1-2, 5-6, and 10-11 stands.

Applicant also contends that Ono does not teach or suggest a roll with a glass coating that can be electrically charged or discharged. Ono discloses an electrophotographic charging member in the form of a roll with a protective outer coating, (column 2, lines 61-66). Glass can be used as the protective coating with conductive fine particles dispersed throughout the coating, (column 6, lines 52-61). As stated *supra*, present claim 1 is drawn to a generic roll with a glass layer that can be electrically charged or discharged. It is not required that the glass layer actually be charged or discharged. Applicant has not provided objective evidence to the contrary that the glass layer of Ono cannot be electrically charged or discharged.

In addition, the reference to Drummond was not used as a basis for the 102(e) rejection but as support to demonstrate that it is known in the art to use charging members in electrostatographic apparatus. As such, the 102(e) rejection using Ono as pertaining to claims 1, 10-11, 23-24, and 42-43 stands. Based upon Applicant's arguments claims 13-14 and 26 have been rejected under a separate 103(a) rejection of Ono in view of Drummond.

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Applicant further contends that the 103(a) rejection of claims 7, 15, and 18-20 over Ono in view of Nakashima is improper for no teaching or suggestion of a glass coated roll that can be electrically charged or discharged, for lack of motivation to combine the references, and no teaching of the features of the abovementioned claims. As set forth above, Ono and Nakashima teach a roll having a glass coating. Applicant has not provided objective evidence that the glass coated rolls of Ono and Nakashima could not be electrically charged or discharged.

In addition, Nakashima discloses a glass coated roll that can be used in printing processes, (column 1, lines 11-32). Ono also discloses a glass coated roll that is used in printing processes. As such, it would have been obvious to one skilled in the art to make the glass coating of Ono with the silicate of Nakashima to make a glass coated roll used as a charging member in an electrostatographic imaging apparatus having a smooth surface upon which foreign matter will not stick therefore increasing the productivity of the imaging apparatus.

Furthermore, while Ono does not specifically disclose the electrical resistivity of the film as exemplified by Applicant, Ono has provided a means for controlling the electrical resistivity, (column 5, lines 56-62). As such, one skilled in the art would be able to optimize the electrical resistivity of the glass coating through routine experimentation to obtain the necessary level of electrical resistivity in the coating to fully function as a charging member, (column 1, lines 9-19). Because Ono disclose that the resistivity of the charging member can be controlled and teaches a mean of accomplishing that goal, the charging member has to have a certain resistivity. Applicant has not provided objective evidence to the contrary that the specific resistivity is critical nor that Ono could not encompass that resistivity without undue experimentation. As such, the 103(a) rejection of claims 7, 15, and 18-20 stand.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

United States Patent no. 6,320,387, disclose a charging device that can be glass coated, (column 11, lines 6-15).

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn A. Blackwell-Rudasill whose telephone number is (703) 305-9741. The examiner can normally be reached on Monday - Thursday; 6:00 am - 4:30 pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gwendolyn A. Blackwell-Rudasill
Examiner
Art Unit 1775

gbr


DEBORAH JONES
SUPERVISORY PATENT EXAMINER